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PHOSPHATE OF IRON AND ITS COMBINATIONS.

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Of Philadelphia.

Iron has long deservedly held a very high place in the list of tonics. At least one hundred different combinations have been proposed, and more than one-third of that number are now incorporated into the different pharmacopœias. These are divided into two chemical classes, the proto-salts and the sesqui-salts, designated ferrous and ferric salts, the former being universally esteemed as the more powerful remedial agents, the latter as the more easily managed pharmaceutical products. Of the former the proto-carbonate, the iron reduced by hydrogen; the proto-sulphate, the proto-citrate, and the proto-phosphate are especially esteemed. Of the latter, the chloric tincture, the ammonio-citrate, the pyrophosphate, and alkaline tartrates receive high consideration. Notwithstanding the numerous objections very justly urged against the tincture of the ferric chloride it is, and probably ever will be, the most valued and most extensively used of the preparations of iron. The preparation I especially desire to consider in this paper, the phosphate of iron, although by no means a modern one, is scarcely ever used in its officinal form. Uncombined it has never gained much favor. The preparation is, however, a good one, and is capable of being combined so as to form some excellent chalybeate pills. The following formulas are very popular ones with me:—

℞. Ferri phosphatis, ℥j.
Quiniæ sulph., ʒss.
Ext. ignatiæ amaræ, gtt.vj. M.

Divide in pills No. xxx. Take one three times a day.

℞. Ferri phosphatis, ℈ij.
Quiniæ sulph., ℈j.
Ex. belladonnæ alcoholic, grs.v.
Ex. aconite, alcoholic, grs.iij.
Ex. cannabis indicæ, grs.x. M.

Divide in pills No. xx. One pill three times a day.

℞. Ferri phosphatis, ℈ij.
Quiniæ sulph, ℈j.
Acid arsenosi, grs.j.
Morphiæ sulph., grs j. M.

Divide in pill No. xx.

But, however valuable a pilular form of iron may be, it is not that which will hold the popularity of a solution, either in the form of a syrup, tincture, or elixir. Even the iron reduced by hydrogen, which is unquestionably the best restorer of iron to the blood, is comparatively little used. The proto-carbonate still holds the preference of the gray-headed members of the fraternity, while the soluble scaled salts with ammonium-citrate are preferred by the younger members of the profession; the choice is between the citrate and pyrophosphate, with perhaps a predominating preference for the latter. The bibasic phosphate constitutes the iron ingredient in nearly all the proprietary elixirs, sold under the names of Elixir Phosphate of Iron, Quinia, and Strychnia; Elixir of Calisaya ferrated, and Elixir of Gentian; the tribasic phosphate

being ill-adapted for the purpose, and a solution in an alcoholic menstruum being very unstable.

The theory, or rather theories, upon which the phosphates and hypophosphites have grown into the esteem of the medical world may thus be briefly stated: Phosphorus, as is well known, is an important element in the brain and nervous system, the expression, "thoughts that burn," being a physiological fact as well as a poetic figure. Dr. Churchill, an American physician practicing in the capital of France, conceived the idea that phthisis pulmonalis emanated from a deficiency of phosphorus in the system. This deficiency he proposed to remedy by introducing phosphorus into the system by means of hypophosphorous acid in the salts of lime and soda. The idea was fascinating, and infatuated a very large portion of the profession. They dreamed that the hitherto relentless upas of human existence was at length mastered, that no longer was its touch withering and its impress death, but that under the life-giving power of the hypophosphites the hectic flush would depart, the cough cease, the emaciated frame resume its former proportions, and as the cause upon which these accrued was removed, health and strength would be restored, and science would, indeed, be triumphant over the foe which heretofore had baffled human skill, and annually consigned to the grave the beautiful and lovely of earth. This beautiful dream, however, proved delusive; consumption still continued its ravages, and the hypophosphites were found to be less efficient than cod-liver oil, yet capable of greatly enhancing the curative power of the latter. But if the hypophosphites did not confirm those high hopes and lofty expectations, they proved to be a powerful remedial combination, capable of giving beneficial results in wasting diseases hitherto unattained by any known agent. They yet retain the esteem of very many intelligent physicians, although, I believe, the present estimate of them is below their intrinsic value. The formulas for their preparation having been published in Parrish's Pharmacy, and as I presume every physician and pharmacist has a copy of this indispensable book, it is unnecessary to copy them here. A preparation I have long esteemed, containing two grains of the hypophosphite of iron, one grain of the hypophosphite of quinia, and one-forty-eighth of a grain of the hypophosphite of strychnia in each drachm, I make thus:—

℞. Ferri. hypophosph.,	grs.192.
Quiniæ (alkaloid fresh),	grs.96.
Strychniæ,	grs.ij.
Acid hypophosph.,	grs.j.
Syrupi, q. s.,	℥xij.

Take the freshly precipitated hypophosphite of iron, the freshly precipitated quinia, and the strychnia, and add sufficient hypophosphorous acid to form a solution; mix it with sufficient syrup to measure twelve ounces; bottle and carefully cork. This preparation is a very valuable tonic, and seems to me to be more important than any other combination of the hypophosphites. Mixed with equal parts of the syrup of soda and lime hypophosphites, its value seems to be greatly enhanced. Sometimes combined in equal proportions with the syrup of the hypophosphite of manganese it proves a powerful restorer of lost strength and vigor.

This formula has proved sometimes very satisfactory:—

℞. Ferri hypophosph.,	℈ij.
Manganesii hypophosph.,	℈i.
Quiniæ,	℈i.

Divide into twenty pills. Take one pill three times a day.

During the summer of 1857 I devoted especial attention to the study of tuberculosis, and having imbibed the doctrines of Dr. Paine, of the University of New York, directed my attention to the brain and nervous system, with especial regard to their influence over the respiratory system. Analyses of twenty autopsies of the victims of phthisis gave evidence of a marked diminution of the amount of phosphorus in the brain and nervous system, with apparent atrophy of the cerebellum, medulla oblongata, and pneumogastric nerves.

I also found that the excretion of the phosphates was very large during the progress of phthisis, and that whatever arrested the progress of the disease also diminished the quantity of these in the urine. I inferred from this that the pathological lesion consisted in some aberration, not of the phosphorus assimilating, but of the phosphatic eliminating function, and intimately connected with the functions of the pneumogastric nerve, spinal accessory, phrenic and hypoglossal nerves. I became convinced that the seat of the disease was in the medulla oblongata; that through the pneumogastric nerve was transmitted, as by a

telegraph wire, the morbid impression by which the digestive and assimilating function became impaired, and the tubercle originated in the lungs. It also appeared very probable that the great sympathetic was also deeply involved in this trouble, and contributed a liberal share of the fatal agency. While I regarded the diminution of phosphorus in the system in tubercular consumption as a concomitant and a coincident intimately interwoven with the origin of the disease, I have never viewed it as the disease per se; *autochthonic* in itself complete, and as to the cause sufficient, irrespective of coöperating and coördinating powers, impressions or influences. I, nevertheless, deemed it proper to resort to the use of phosphoric acid with a twofold purpose, to secure the tonic influence on the digestive powers, and the nerve stimulant effect it so promptly gives, hoping thus to reach important indications. Fifteen years' experience has justified my view. A very similar combination to one now highly esteemed was formed. Out of my speculating grew my syrup of the phosphate of iron, quinia, and strychnia, which, although not filling my early sanguine expectations, is yet highly valued by myself and a dozen or more physicians. I prepared it thus:—

℞.	Sulphate of iron,	grs.800
	Phosphate of sodium,	grs.1280.
	Sulphate of quinia,	grs.384.
	Dilute sulphuric acid,	q. s.
	Aqua ammonia,	q. s.
	Strychnia,	grs.10½.
	Syrupy phosphoric acid,	℥iij.
	Syrup sufficient to make	℥xxxij.

Dissolve the sulphate of iron in three ounces of boiling water, and the phosphate of sodium in six ounces of boiling water. Mix them and wash the precipitated phosphate of iron until the washings cease to be affected by a solution of the chloride of barium. Dissolve the quinia sulphate and the strychnia in two ounces of water by aid of dilute sulphuric acid, and precipitate the alkaloids by slowly adding ammonia water, and carefully wash them. Rub the phosphate of iron, quinia, and strychnia with four ounces of water, add the syrupy phosphoric acid and dissolve them. Then filter the solution into sufficient syrup to make thirty-two fluid ounces. In the formula published in the *Druggists' Circular* it is directed that the syrupy phosphoric acid be mixed in ℥xvj of distilled water, the iron, quinia and strychnia dissolved in the solution, and ℥xviij+℥ij of sugar be added.

The formula here given produces rather a finer pharmaceutical product, and seems less impressible to atmospheric exposure. The formula given in the *Druggists' Circular*, however, will produce *quite satisfactory results* and answer every purpose. Easton's formula, published originally in Aitken's Practice of Medicine, and by some erroneously called Aitken's formula, is prepared thus:—

℞.	Sulphate of iron,	℥v.
	Phosphate of soda,	℥j.
	Quinia sulphate,	grs.192.
	Dilute sulphuric acid,	sufficient.
	Aqua ammonia,	sufficient.
	Strychnia,	grs.vj.
	White sugar.	℥xiv.
	Dilute phosphoric acid,	℥xiv.

Dissolve the sulphate of iron in one ounce of boiling water, and the phosphate of soda in two ounces of boiling water. Mix them and wash the precipitated phosphate of iron until the washings are nearly tasteless. Dissolve the sulphate of quinia in two ounces of water by the aid of dilute sulphuric acid, and precipitate the quinia by aqua ammonia, and carefully wash it. Dissolve the phosphate of iron and the quinia thus obtained, as also the strychnia, in the dilute phosphoric acid; then add the sugar and dissolve the whole without heat.

This formula, the one having semi-official recognition, is somewhat defective, and precipitates the iron in a few weeks, so as to modify its therapeutical powers, and seriously impair its pharmaceutical beauty. The dilute phosphoric acid is not sufficient to dissolve the iron, quinia, strychnia, and sugar, and hold them in perfect solution; the amount of sugar is not sufficient to preserve the preparation from deterioration by age and atmospheric influences, while the preparation by the above formula of mine seems to be free from these objections.

Being desirous of forming a concentrated syrup of much greater strength than the above, so as to be more convenient for use on the tented field, I devised the following formula in 1864:—

℞.	Freshly prec. phos. of iron,	grs.600
	Quinia, freshly precipitated.	grs.96
	Strychnia,	grs.iij.
	Syrupy phosphoric acid,	℥iv.
	Water,	14 drachms
	Syrup (very dense), q. s. ad.	f℥12

Mix the phosphate of iron, quinia, and strychnia in the syrupy phosphoric acid previously diluted with fourteen drachms of water, and dissolve them. Add sufficient syrup to measure twelve fluid ounces, and bottle with a tight-fitting stopper, so as to exclude the air entirely.

Each drachm will represent above five grains of the ferrous phosphate, one grain of the quinia, and one-thirty-second of a grain of strychnia phosphate. There is about three grains of free phosphoric acid and about ten grains in basic combination of the same. Although a good preparation for an army surgeon, it is rather too powerful for private practice. Outside of my military practice I have never used it, although it was a great favorite of mine in the army hospitals.

In compliance with the wishes of several physicians, Mr. Theodore A. Polk, of Seaford, Delaware, prepares the syrup thus:—

℞.	Freshly prec. phos. of iron,	grs.192
	Phosphate of quinia,	grs.64
	Strychnia,	grs.2
	Dilute phosphoric acid,	℥x.
	Sugar,	℥viij.
	Essent. tinct. orange,	ʒiij.
	Oil of cardamon,	gtt.viij.

Dissolve the phosphates of iron, quinia, and strychnia in the dilute phosphoric acid. Rub the essential tincture of orange and oil of cardamon with the sugar. Mix all together and dissolve without heat.

Mr. Charles Bullock, of Philadelphia, has proposed a formula which may merit at least a passing notice. The articles and quantity are precisely the same as in Easton's formula. He dissolves the iron and soda in an unnecessarily large quantity of water, and thereby gets a magma rather difficult to wash. His mode of washing on paper filters has, in many hands, ever proved a very unsatisfactory and annoying process, universally attended with heavy loss. The filters are apt to tear, and portions of the magma will adhere to them. He also dissolves the iron in six ounces of the dilute phosphoric acid and the alkaloids in the remaining eight ounces of the phosphoric acid, and mixes the solutions, then filters, or rather he proposes to filter through paper, after dissolving the sugar in the solution. By this means the almost unavoidable atmospheric exposure will impair the preparation. The precipitate is generally copious, and discoloration speedily evinced. Of course I speak of my own manipulations of the formula, *which, in my hands, has proved a complete failure.*

LACTO-PHOSPHATE OF IRON AND LIME.

℞.	Freshly prec. phos. of iron,	ʒiij.
	Syrupy phosphoric acid,	℥vj.
	Concentrated lactic acid,	℥ij.
	Freshly prec. phos. of lime,	ʒiij.
	Syrup of orange flowers, q. s.,	℥xij.

Add the phosphate of iron to the syrupy phosphoric acid, previously diluted with two ounces of the orange flower syrup. Mix the phosphate of lime with the concentrated lactic acid, previously diluted with two ounces of orange flower syrup, and dissolve. Lastly, mix the two solutions together and add sufficient syrup to measure twelve ounces.

I believe this formula, or a similar one, is destined, at no remote day, to attain the very zenith of professional confidence. I believe it possesses rare intrinsic merit, and embodies curative powers unequaled in certain forms of debility. In convalescence from acute diseases it promises much. Phosphate of lime is well known to be an important element in the human organism, a real essential in the phenomenon of life. Experiments made of depriving animals of it, by removing it from their food, have been attended with rapid prostration and exhaustion, while the restoration to the food restored them to their former condition. The waste of the phosphate of lime is very great during fevers and inflammations, and the depleted organism demands its restoration. True nearly every article of food contains it in a greater or less degree, yet the stomach is weak, the digestive and assimilative powers impaired. The emaciated frame demands it in a more readily assimilable form, and this very condition is very excellently filled in the syrup of the lacto-phosphate of iron and lime. If given with an elixir of cinchona, like that published in the December number of the MEDICAL AND SURGICAL REPORTER, the result would be greatly enhanced.

SYRUP OF THE PHOSPHATE OF IRON AND AMMONIA.

Heat phosphate of soda to redness. Take of the pyrophosphate of soda so obtained ʒij. Dissolve in one pint of water. Take of the sulphate of iron ʒiv. Dissolve in twelve ounces of water. Mix the solutions, collect,

wash, and dry the precipitate at a gentle heat over a water bath. Take of this precipitate ℥j, liq. ammonia ℥iss, water q. s. Dilute the ammonia water with an equal volume of distilled water, and rub it with the phosphate of iron in a mortar until the latter is dissolved. Then dilute to seven ounces, and preserve gentle heat until it is evaporated to six ounces, and add ten ounces of dense syrup. Each drachm contains four grains of the phosphate of iron with ammonium. The syrup is quite permanent and remarkably free from inky taste. It is, no doubt, a very good preparation. The only specimen I have ever seen of it was made by Dr. A. D. Hauverman, now practicing at Chattanooga, Tennessee, but not being at all partial to bibasic phosphates I have never used it. My partiality is, however, very strong for the following preparation:—

SYRUPUS FERRI ET AMMONII CUM QUINIÆ ET STRYCHNIÆ PHOSPHATI.

℞.	Ferri sulphatis granulati,	℥vj.
	Sodii phosphatis,	℥x.
	Acidi phosphorici anhyd.,	℥xij.
	Acidi nitrici c. p.,	℥iij.
	Quiniæ sulphatis,	℥j.
	Acidi sulphurici dil.,	q. s.
	Aquæ ammoniæ concent,	q. s.
	Strychniæ citratis,	grs. xiijss.
	Sacchari albi,	℥xxx.
	Aquæ distillatæ, q. s.,	℥xlviij.

Prepare the anhydrous phosphoric acid by igniting phosphorus in dry oxygen. As soon as the combustion is completed dissolve twelve ounces of the white anhydrous phosphoric acid in sixteen ounces of distilled water; add the nitric acid, place on a sand-bath and apply heat until the fumes of nitric acid cease to be evolved. Dissolve the sulphate of iron in ℥x of boiling water, and the phosphate of sodium in twenty ounces of boiling water. Mix the solutions and carefully wash the magma until the washings are tasteless. Dissolve the quinia and the strychnia in four ounces of water, and precipitate the alkaloids by slowly adding a weak solution of ammonia water, and carefully wash them. Add the phosphate of iron to six ounces of the solution of phosphoric acid, and apply gentle heat until dissolved. Dissolve the quinia and the strychnia in four ounces of the solution of phosphoric acid. Saturate the remaining solution of the phosphoric acid with the concentrated ammonia water. Lastly, add the solutions of the phosphate of iron, the alkaloids and the phosphate of ammonium together in a bottle of the capacity of three pints, introduce the sugar and sufficient water to complete the measure of forty-eight ounces.

The same result can be obtained by using twelve ounces of syrupy phosphoric acid. The iron, quinia, and strychnia being dissolved in six ounces of the syrupy phosphoric acid and the remaining six ounces saturated with the concentrated ammonia water, mix them, and then add the sugar and water as above directed. The only objection that can be urged against this preparation is the very large amount of phosphoric acid, but when we consider that it is nearly all in basic combination the objection is less than it first appears. I regard this ammoniated syrup of the phosphates as a very valuable addition to our list of remedial agents.

Each drachm contains five grains of the phosphate of iron, six grains of the phosphate of ammonium, one and one-fourth grain of the phosphate of quinia, and one-twenty-eighth of a grain of the phosphate of strychnia. If therapeutically inferior to the syrup of the phosphates of iron, quinia, and strychnia, as a tonic, the phosphate of ammonia adapts it to an especial range of diseases. The permanency of the syrup also entitles it to important consideration. This formula differs very much from one previously published, and seems to be a better one.

PHOSPHATE OF IRON WITH AMMONIO-CITRATE.

The phosphate of iron with ammonio-citrate is a very valuable preparation, and possesses several advantages over the bibasic phosphate with ammonio-citrate. The profession is indebted to Mr. Crease, of the *Physician and Pharmacist*, for the proper method of preparing it in scales (see the *Physician and Pharmacist*, November, 1871), and to Mr. R. Rother for the syrup form. For several years past I have been accustomed to prepare a syrup of this form of iron thus, however using the potassic-citrate instead of the ammonic-citrate.

SYRUP PHOSPHATE OF IRON WITH POTASSIC-CITRATE.

℞.	Liq. Ferri Tersulphatis,	℥viij.
	Sodii phosph.,	℥ix.
	Acidi citrici,	℥xiv.
	Potassii bicarb.,	q. s.
	Sacchar. alb.,	℥xiv.
	Aquæ,	q. s.

Dissolve the phosphate of sodium in one pint of boiling water, and slowly add to the solution the tersulphate of iron, stirring slowly until the phosphate of iron is completely precipitated. Then wash it in a funnel, on a muslin filter, until the washings are tasteless. Saturate the citric acic dissolved in one ounce of boiling water with the bicarbonate of potassium, add to the iron and apply gentle heat on a sand-bath until the iron phosphate is dissolved. If it is not dissolved readily a small amount of citric acid may be added, which very promptly secures a perfect solution. Evaporate to ten ounces, add the sugar, and continue a gentle heat until the sugar is dissolved. Each drachm represents fifteen grains of the citro-potassic ferro-phosphate.

This syrup can be very readily used as the ferric base of an elixir with quinia, cinchona or gentian. Or the sugar may be omitted and the process of scaled ferric salts followed, by which very perfect olive green scales may be obtained. It will be observed that the process is almost precisely like that followed for the pyrophosphate of iron, only the tribasic phosphate of soda is used instead of the bibasic phosphate.

SYRUP OF THE SUPERPHOSPHATE OF IRON.

Dissolve four ounces of glacial phosphoric acid in six ounces of water, raise the temperature to the boiling point, and add sufficient freshly precipitated phosphate of iron to saturate the solution, then introduce sufficient syrup to make thirty-two fluid ounces. If it be desired to unite quinia alone, or with strychnia, add the freshly precipitated alkaloids in the proportion of one grain of quinia and one-twenty-eighth of strychnia to each drachm, or two hundred and fifty-six grains of the former and eight grains of the latter to an ounce of water, and rub them up with nine drachms of syrupy phosphoric acid. Add sufficient syrup to the iron to form sixteen ounces, and sufficient syrup to the alkaloids to measure sixteen ounces, and add the two syrups together. This forms a powerful tonic, seldom disagrees with the stomach, is entirely void of the slightest inky taste, and proves a very effective preparation. Unfortunately, it is very unstable and deteriorates rapidly. This fault can be remedied by adding two ounces, instead of nine drachms of syrupy phosphoric acid, but then it will have the faults of the concentrated ferrous syrups without their tonic power, in relative doses.

In conclusion I may here remark that the syrup of the hypophosphite of iron, quinia and strychnia exceeds in its therapeutical value every other preparation here given. Pharmaceutically, however, it is not perfect, and I would be very thankful for an economical and practical mode of preparing it. To me this preparation is yet an unsettled problem.

The syrup is also so expensive as to be an obstacle to its general use.

The syrup of the phosphates of iron, quinia and strychnia prepared by my formula is an article of great value, and will seldom disappoint those who trust it as a general tonic.

The phosphate of iron with ammonium-citrate is a mild chalybeate, very soluble, readily incorporated into compounds, either as elixirs, syrups, or pills, and thus fills a very important desideratum. It is therapeutically and pharmaceutically superior to the bibasic phosphate, which it is destined to supersede in many preparations where the latter is now employed. I do not believe bibasic phosphoric acid possesses any remedial powers. The phosphate of iron with ammonium phosphate is worthy of further investigation. The more I have used it the more I have been impressed with its great importance, the wider its range of application, and greater my confidence in its remedial power. In chronic engorgement of the uterus, attended with aching pain in the left iliac region, with tenderness on pressure, morbid sensibility along the course of the spine, deranged digestion, attended with constipation, headache, nervous derangement of the heart, attended with marked ænemia, I have found this combination to give better results than anything else in the manner of constitutional treatment. In fact, in nearly every case unattended with ulceration or organic disease this syrup, assisted by enemas of cold water (one pint being injected into the bowels upon arising from the bed every morning), and an occasional blister over the region of the uterus, gave very prompt relief and produced a radical cure.

In certain forms of neuralgia it seems to exceed in its prompt and permanent relief every other known remedy. A few months

ago I was consulted by a lady who had been for two years a victim of sciatica. Aconite, belladonna, bromide of potassium, iodide of potassium, colchicum, blisters, moxas, arsenic, morphia, quinia, and iron (the subcarbonate) had been freely used without any permanent benefit. I prescribed for her this preparation, to be taken in teaspoonful doses three times a day, however increasing the amount of quinia to two grains in each dose, twenty grains of hydrate of chloral, twenty grains of the bromide of potassium, and one drachm of the valerianate of ammonium, to be taken in a wineglassful of port-wine at bed-time, and a liniment composed of equal parts of saturated tincture of aconite (18 oz. to the pint), chloroform, and sufficient camphor to saturate them. Within a week the suffering was much mitigated, and in six weeks after the cure seemed perfect.

In neuralgia of the face and head, the result has been extremely gratifying. Cases that had defied every other treatment often obtained relief from this syrup. About four months ago a gentleman about fifty years of age placed himself under my treatment. He was suffering intensely with neuralgia of the left side of the head, his eyesight very much impaired, and his intellectual faculties reduced almost to the condition of a puling babe. I placed him on this preparation. The improvement was remarkable. In one week the acute pain had subsided to a slight soreness, the eyesight was very much improved, the change in his physiognomy was very marked, the pale, haggard, woe-begone expression, so marked on his countenance at the beginning of my treatment, was replaced by a bright, cheerful face. He used twelve ounces of the preparation, and then, not being able to procure it, was persuaded to use Easton's syrup—that it was just as good. It seemed for a couple of weeks to do a slight benefit. The physician then placed him on bromide of potassium, and all the good he had received from the iron treatment was speedily undone.

In those cases of subacute rheumatism associated with anæmia, nervous debility, and slight cardiac trouble, in fact, the very numerous class of rheumatics found in low, damp, malarial situations, I esteem the syrup of the phosphates of iron and ammonia, with quinia and strychnia, very highly. I, however, use it in alternation with the following:—

℞.—Tinct. guiac. amm.,	℥ij.
Fluid ext. colchici rad.,	℥ss.
Potassii iodidi,	℥iss.
Fluid ext. cardamoni,	℥iij.
Syrupus aurant. cort.,	℥ij.
Aquæ q. s.,	℥viij.

Tablespoonful every four or six hours.

This treatment has been generally very satisfactory in my hands, and holds my confidence in a higher degree than any other.

Although one might, *a priori*, infer that the main good resulted in such cases from the last recipe, I do not think so. The phosphate of ammonia is one of the most valuable remedies in rheumatism. Quinia is well known as an anti-rheumatic, especially in the class of cases above referred to. In diseases of the urinary and genito-urinary organs, this combination does much good. While a medical officer in the federal army, I had very rare chances of using this remedy, and watching the effect, as it only can be watched in an army hospital, during the late civil war; and, taking my own experience as a datum, I am very positive in my conclusion that it often did more good than I obtained from other remedies. In chronic diarrhœa, complicated as it very often was with Bright's kidney disease, this preparation often stayed the progress of this very obstinate malady, although I am sure not a single cure was permanent, except those sent to Northern hospitals, in which cases the removal from concurring and exciting causes did more advantage than could have possibly accrued from the entire paraphernalia of the materia medica.

In imperfectly cured pneumonia, where there has been extensive extravasation into the parenchyma of the lungs, the air-cells obstructed by the albuminous exudation, and a low state of inflammation still continuing, this preparation has given very good results, especially by adding about twenty grains of phosphate of ammonium to each dose. Such cases are generally diagnosed phthisis, dosed with cod-liver oil, and buried. A correct diagnosis and judicious treatment will cure nearly all of them. Such cases have given éclat to Jayne's Expectorant and other almost as vile nostrums. Although those abominations are usually very prejudicial to such cases, the conservative resources of nature surmount both the poison and the disease. Notwithstanding the poisonous

properties of the so-called "Winslow's Soothing Syrup" have received pretty extensive condemnation, I regard it as a comparatively harmless remedy alongside of this "Expectorant" of the "Prince of Quacks." The diagnosis between phthisis and chronic pneumonia is too seldom, I fear, definitely determined. The rapid destruction of the lungs after acute pneumonia is too often erroneously attributed to tubercles, and the true pathological lesion overlooked. In such cases the syrup of the phosphate of iron and ammonia, with quinia and strychnia, is entitled to favorable consideration, and I have no doubt that very many would recover under judicious treatment, who die from the sequelæ of pneumonia. In recommending the syrup of the phosphate of iron and ammonium, with quinia and strychnia, as a very valuable agent in the sequelæ of this disease, I need hardly remind the profession that the presence of inflammatory symptoms contra-indicate the preparation; the iron is very prejudicial to the already irritable air-cells. Phosphate of ammonium and phosphate of sodium seem to have a marked influence. Ten grains each, given in an ounce of camphor water, and repeated four or five times a day, very often modifies the condition materially, if it does not dissipate every inflammatory symptom. Inflammatory symptoms being removed, the iron combination can be used with marked benefit. Phosphorus certainly exerts a marked influence over pulmonary troubles. I have seen several cases of acute pneumonia treated by phosphorus in $\frac{1}{200}$ of a grain doses, and repeated every two or three hours. They did very well. The improvement was marked and rapid, and the cure effectual. I have, however, never ventured to trust a patient of my own to such treatment.

The hypophosphites are unquestionably the best medium by which phosphorus can be introduced into the system, by which the curative impression can be transmitted. The hypophosphites of iron, ammonium, quinia, and strychnia seem to equal, if not surpass, the phosphates of the same salts in nerve trouble, surpass that combination in pulmonary diseases, but prove very much inferior in rheumatism, gout, uterine and kidney derangements. As a tonic, no combination yet devised, of iron and alkaloids, equals the syrup of the ferrous phosphate, with quinia and strychnia, made according to my formula.

Medical Societies.

GALLIA COUNTY, OHIO, MEDICAL SOCIETY.

[OFFICIAL REPORT.]

June 4th, 1873. Society called to order by Dr. Wm. S. Newton, President. Minutes of previous meeting read and approved.

Committee appointed, consisting of Drs. Fletcher, Morgan, and Jacobs, to prepare a restricted fee bill to be presented at the next meeting.

Dr. R. D. Jacobs read an essay on typhoid fever, considering its course, prognostic and diagnostic features, and its treatment, speaking at length upon the use of cantharidal blisters and the administration of the tincture of cantharides in comatose cases caused from the non-excretion of the secreted urea.

The Doctor stated that in the year 1862 he treated one hundred and eleven cases of typhoid fever; the necessity of having trained and skilled nurses, frequency of change and cleanliness of bed clothing, and for the intestinal lesions the advantages of turpentine with mucilage, of the use of the mineral acids, and, at the later stages of the disease, the use of nutritive and supporting treatment, such as good brandies, whisky, eggs, farinaceous diet, and sulphate of quinia in one grain doses.

Dr. Mills spoke of the direct cause of typhoid fever, and upon the early use of diaphoretics.

Dr. Sanns spoke of the early resorting to stimulating treatment, and with considerable stress upon the use of milk punch, from its direct assimilation and its beneficial effect on the bowels, reserving the use of turpentine until after the second cleaning of the tongue. The Doctor complimented the essayist, and heartily endorsed the article.

Dr. Alcorn said he was not partial to the terebinthina, but was in favor of early administration of quinia sulphas in infinitesimal doses.

Dr. Rathburn thanked the essayist for his paper, and endorsed it, and said he did not like the old treatment with the hydrarg. sub. murias, as it reduced the fibrine in the blood.

Doctors Gardner, Mills and Morgan were appointed essayists for the next meeting.

Motion made and carried, to adjourn till July 2, 1873. W. C. H. Needham,
Secretary.

EDITORIAL DEPARTMENT.

PERISCOPE.

Phosphatic Food in Debility.

DR. ROUTH, of London, gives among others the following instructive cases in the *Medical Press and Circular*.

July 1. Rev. T. H. F., æt. about 60, has been a clergyman for many years, preaching with notes only, but lately has become confused whilst preaching, forgetting the thread; seems also to have experienced lately want of power to grasp subjects. Recovers himself after a time, but the fear of this makes him very nervous; sleeps fairly, not troubled by dreams; lives in Cheshire, in a damp, cold neighborhood; loss of memory occurs frequently at other times than when preaching; no recollection, especially of names and figures; urine normal, no sediment; total loss of virile power; no backache, but a creeping sensation up from the nape of the neck; no loss of muscular power on either side; eyesight weak; no indigestion; cannot digest lobster; first sound of heart rather prolonged, especially at base; bowels regular in London, more so than in country. Ordered Parrish's food, oyster and other shell fish, excepting lobster. As his teeth are bad, use a small digestive sausage machine.

July 31. Greatly better. Had profited greatly from the treatment. The mental faculties much improved. States is not the same man. He was now ordered allotropic phosphorus, g. x. daily, after his dinner. My last account from this gentleman was that he had completely recovered.

Mrs. Y., æt. about 42, consulted me in November last for loss of mental power and strength. The catamenia had stopped twelve months, and she too had a large family, with small means, and was much worried by creditors. Her memory is very defective, indeed, gone; she can't remember anything, nor when she puts away any articles of dress. When she has a good night she is rather better for a few hours, and then the same state recurs. She is always worse if she has had her attention forcibly called to anything; is very restless at night; her feet being drawn up as if she was going to have a convulsion; is become shockingly bad-tempered; will become violent on the slightest contradiction; feels very anxious and unhappy; bowels open; tongue clean; no leucorrhœa at present, although five months back she used to have them copiously for two or three days in lieu of the catamenia.

Ordered mustard to nape of neck; feet in hot water; half a drachm of bromide of potassium every night in water; sol. phosph. used m. x. *ter. die.* A week after (November 12) was generally better, except that she had one bad day.

On the 19th she was better, but she stated that she had taken the bromide very irregularly, finding she could sleep without it, and the head was much less giddy.

This patient I saw for several weeks after. The treatment was interrupted by a bilious attack, which obliged me to suspend the phosphorus; subsequently it was resumed. She is now greatly better; feels that the phosphorus acts as a sort of tonic, or rather, as she expresses it, can't sleep without it. Memory greatly improved; some days not so good; but the intervals are longer, and generally her improvement is marked, and she is, in fact, convalescent.

Recent Theories on Consumption.

We learn through the *Medical Press and Circular* that Dr. Jaccoud, of Paris has published a work (*Lecons de Clinique Medicale*) in which he adopts the ideas of Niemeyer about phthisis. It has been thought by most medical men since the days of Lænnec that phthisis pulmonalis is a disease often hereditary, whose prognosis is almost always fatal, and against which, consequently, therapeutics are almost useless. Dr. Jaccoud says no: slow ulceration of the lung is what constitutes the chronic condition called phthisis. But there exist, he thinks, two very distinct kinds of phthisis:—1st. Pneumonia or cheesy phthisis, which arises without previous tuberculosis. 2d. A tubercular phthisis, due to pneumonic lesions secondary to the evolution of granulations. Thus, M. Jaccoud opposes duality to the unity of phthisis; and, in his eyes, if tubercular phthisis constantly, or nearly constantly, ends in death, this is not the same with pneumonic phthisis, which is curable at all periods of its evolution, that of excavation comprised. He admits, and without any contest, the statistics of Colberg and Slavjansky, who, of 100 phthiscal patients, found the first 90, the second 88, cheesy pneumonias with tubercles, and he also professes, without giving the statistics, that pneumonic phthisis is far the most common kind.

We are thus able to understand that M. Jaccoud insists on the differential characters which separate the two species of phthisis, and speaks much of the treatment of the pneumonia which produces the phthisis. But we must say that M. Jaccoud's statistics neither prove the non-fatality of simple phthisis, nor any other point advanced by him. He is even obliged to confess that even when cases of cheesy pneumonia are at first entirely independent of tuberculosis, those which produce phthisis are often complicated in a variable space of time with

a secondary production of granulations. On the other hand, he admits that in true tuberculosis, the primary granulations may disappear up to the very last one, from necrobroses and ulceration; on this fact rests the argument that, although no granulations exist at present, they have existed. This is the argument of those who speak of the unity of phthisis.

The last works of MM. Cornil, Graucher, and Thaon tend to prove that we may always, in cases of caseous pneumonia, ascertain the presence of tubercular granulations. M. Thaon, who has made a minute study of 250 autopsies of phthisical persons, has arrived at being quite doubtful as to the existence of essential cheesy pneumonia, and is still looking about for the first clear case of it.

Treatment of Pneumonia.

Dr. DRYSDALE says on this topic, in the *Medical Press and Circular*:—

Bleeding is useless, except in the first days of pneumonia, when the crepitating râle is present; after this time it produces only anæmia.

Slight blood-letting sometimes diminishes the dyspnœa in pneumonia, and sometimes softens the pulse in sthenic cases. It should not be used in the delirium of pneumonic patients; for, as Dr. Magnus Huss has shown, such cases of delirious pneumonia occur usually in drinkers, or in the aged. "Bleeding" (says Van Swieten) "kills drinkers." Children should not be bled, for expectant treatment does best in their case; and, if bled, children may be rendered anæmic for long. Old persons, again, should not be bled. The inhabitants of towns are rather paler than countrymen; but bleeding suits neither citizens nor country people. Country people are often reddened by the sun, and also by alcohol, and bleeding soon exhausts their strength as well as that of townsmen.

Perhaps, then, the true treatment of pneumonia, even of the most sthenic form, consists in low diet, cold fresh air, frequently renewed; and, for drugs, the use of small doses of tartarized antimony in fit cases. Whether hot fomentations or cold applications (ice to the part affected) should be used is not, perhaps, quite clear. The former are less formidable, and often do great good in relieving the dyspnœa. The wet sheet will reduce the temperature sometimes from 104° F. to 102° and gives great relief in fit cases. Alcohol is of no service in pneumonia, or in fevers which, when treated carefully by attention to temperature, food, and plenty of cool air, do usually very well indeed; unless, indeed, in worn-out and aged persons, in whom pneumonia is often from the first clearly destined to end fatally, or in young children when the fever runs very high.

REVIEWS AND BOOK NOTICES.

NOTES ON CURRENT MEDICAL LITERATURE.

——A timely and excellent address by Dr. I. RAY, entitled "Ideal Characters of the Officers of a Hospital for the Insane," has been published. It should be carefully studied by every officer of these Institutions in our land.

——Ethnology has always an interest for the enlightened physician. We therefore note with pleasure the activity lately manifested in this department. Col. FOSTER'S *Pre-Historic Races of the United States* will obtain a wide sale. The Anthropological Society of Berlin has recently issued some useful instructions for the guidance of naval and medical officers in collecting information on ethnology, anthropology, philology, pre-historic archæology, and kindred subjects. A supplementary part of the *Zeitschrift fur Ethnologie* is devoted to the publication of a number of vocabularies and other specimens of languages, collected by Dr. SCHWEINFURTH during his journey in Central Africa. "A Hand-Book of Ethnography," by Dr. F. MULLER, will shortly be published by Beck, Vienna.

BOOK NOTICES.

Chemistry: General, Medical and Pharmaceutical. Including the Chemistry of the United States Pharmacopœia. A Manual on the General Principles of the Science, and their Application to Medicine and Pharmacy. By JOHN ATTFIELD, Ph.D., F.C.S., etc. Fifth Edition. Revised from the Fourth English Edition by the Author. Philadelphia, Henry C. Lea, 1873. 1 vol., 8vo, Sheep, pp. 606. Price $3.25.

This edition of Attfield's popular manual has been thoroughly revised by the author, and additions to the extent of about seventy pages made, so that the latest developments of this very rapidly growing science should

receive due notice. Especially every novelty in Pharmaceutical Chemistry has been incorporated, and the work adapted as fully as possible to meet the wants of the physician and druggist. The chapter on Chemical Philosophy, an abstruse subject which has not yet received a permanent shape at the hands of men of science, has been entirely re-written, and the metaphysics of the science placed in the shape just now most acceptable to those who study it most closely. The proof has been read with great care, and a complete Index adds much to the value of the volume. Physicians are too apt to let their knowledge of chemistry fade away in active life, but it is a serious mistake to do so, and there is no excuse when such clear and compact treatises as this offer for a very little study to place them *au courant* of the most recent discoveries.

Contributions to Practical Surgery. By George W. Norris, M. D., etc. Philadelphia: Lindsay & Blakiston, 1873. 1 vol., 8vo, cloth, pp. 318. Price $4.00.

In this handsome volume Dr. Norris has included the essays on Non-union after Fractures, on the Statistical results of Operations on the Larger Arteries, and upon Fractures and Amputations, which he has previously published in medical periodicals, and to them has added a paper on Compound Fractures, a large amount of new material on the occurrence of False Joints, numerous Clinical Histories, and a short article on Varicose Aneurism at the Bend of the Arm.

The statistical method which he follows in investigating these subjects requires a very extensive search in the periodical literature of science, and it is easy to see, but not easy for one unaccustomed to such researches to appreciate the vast amount of labor which he has expended in collating so many different sources. By such labor alone, however, can the disconnected reports of numerous operators be made of real value as a guide to future action in surgery. The reports of cases thus acquire a permanent value in the eyes of readers, and the experience of the many can be rendered available for all.

Dr. Norris employs the results thus obtained with judgment and discrimination. Merely to jot down figures and add up columns is not the sound statistical method, though too often observers, especially medical writers, seem to think it is. These figures do not represent the same facts. Each case has its peculiar features, and in classification these must be carefully distinguished. This the author does with great pains, and the reader feels no hesitation in accepting his results, as a fair exposition of the present state of knowledge on the points he discusses.

The work is admirably printed on heavy toned paper, in clear type. But the absence of an index is a piece of neglect, for which both author and publisher are inexcusable. A book without an index, in these days of many books, ought not to be allowed a copyright.

On the Treatment of Diseases of the Skin: with an analysis of Eleven Thousand Consecutive Cases. By Dr. McCall Anderson, etc. Philadelphia: Henry C. Lea, 1873. 1 vol., 8vo, pp. 84. Price $1.25.

We have noticed at some length, in a previous number of the Reporter, the English edition of this work, and its republication by an American house will be timely and useful. As a brief record of a very extended experience in dermatology, it has not lately had an equal. Dr. Anderson is eminently practical, and he does not lose himself and waste his readers' time in the mazes of classification, as many writers on skin diseases do, but goes direct for therapeutics, and in that department has positive views founded on extensive observation.

A Guide to Urinary Analysis, for the Use of Physicians and Students. By Henry G. Piffard, A. M., M. D., etc. New York: Wm. Wood & Co., 1873. 1 vol., cloth, 8vo. pp. 88.

A brief, carefully prepared manual of urinary analysis is here offered the profession. It contains instructions on the collection and measurement of urine, a description of the apparatus required for its examination, the reagents and standard solutions employed as tests, the color, reactions and specific gravity of urine, the estimation of normal and abnormal constituents, the marks of the presence of medicinal substances, thermometrical and barometrical tables, a bibliography of recent works on urinary analysis, and a price list of instruments. The paper and print is excellent, and there are a number of illustrations carefully printed.

MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, AUGUST 2, 1873.

S. W. BUTLER, M. D., D. G. BRINTON, M. D., Editors.

☞ Medical Societies and Clinical Reports, Notes and Observations, Foreign and Domestic Correspondence, News, etc., etc., of general medical interest, are respectfully solicited.

Articles of special importance, such especially as require original experimental research, analysis, or observation, will be liberally paid for.

☞ To insure publication, articles must be *practical*, *brief* as possible to do justice to the subject, and *carefully prepared*, so as to require little revision.

☞ Subscribers are requested to forward to us copies of newspapers containing reports of Medical Society meetings, or other items of special medical interest.

We particularly value the practical experience of country practitioners, many of whom possess a fund of information that rightfully belongs to the profession.

The Proprietor and Editors disclaim all responsibility for statements made over the names of correspondents.

THE BELIEF IN SPECIFICS.

The therapeutical doctrines of treatment on "general principles," and the "healing power of Nature," are so rife nowadays that it requires some courage to say that we believe in any specifics at all. You are at once requested to define a specific, and straightway your definition is attacked and criticised, and you are informed that any such faith is incompatible with the tone of modern science. That a substance can act toward a disease as an antidote acts toward a poison, neutralizing and rendering the disturbing cause inert, is not willingly granted.

Yet scanned ever so critically, there is nothing incredible, nothing impossible in such a credence. Whatever our theory of acute diseases, and we ask all to beware of that scientific intolerance which would maintain the views just now prevalent as the only true ones, there is such a thing as the immediate destruction of their causes. Whether spores, or germs, or parasites give rise to epidemics, we may say, as Lady Macbeth of Banquo and his son,

"In them nature's copy's not eterne,"

and reasonably hope to find some mortal weapon for them.

The treatment by expectancy and general principles is in fact but a make-shift, an alternative forced upon us by our ignorance of better, more direct means. The future of medicine is not a perfected system of nursing the sick, as many seem to think, but a discovery of positive therapeutical means. We are not visionary enough to suppose with some of old that for every disease nature provides a remedy. Nature takes no such care of her creatures. But the value of research is vast; there are far more remedies in the world than we have yet found.

The vague and negative theories of medical philosophy, invented for no other purpose than to make us boastful of our ignorance, hurt progress and discredit investigation in fruitful directions.

NOTES AND COMMENTS.

Another Discovery.

Darwin teaches that our remote ancestors were amphibious; but that our descendants may become amphibious if we wish them to be, was reserved for an American physician to demonstrate. The story is told in the London *Medical Press and Circular*, of June 18, in the following words:—

Dr. Schultz, of Chicago, has the merit of having invented something unmistakably new, and of explaining one of the deficiencies of the mechanism of the circulation in man; but at the risk, we think, of a prolonged incarceration for manslaughter should any fatal result ensue from the experiments which have been performed on this occasion, not only on the "corpore vile" of a setter's pup, but on his own child.

The foramen ovale, admittedly, in some diving mammals (as in the seal), is open, to allow free circulation during the prolonged plunges of these creatures. Dr. Schultz, influenced by such observations, directed his attention to transforming human beings into diving animals, by obtaining the non-closure of this opening in the early periods of life. He proceeded, submitting the new-born puppies of a setter to the experiment,

by immersing them in warm water at blood heat, and keeping them immersed from two to five minutes; he found that no unpleasant results followed. Fortunately, or unfortunately, as the case may be, a little Schultz was, at this conjuncture, projected into this *terra incognita*. The parent determined on his being amphibious, and on receiving this pleasing token of affection, he immersed it in a pail of water heated to blood temperature, and kept it below the surface for four minutes; after some seconds the blood "found its way through the foramen ovale."

The process was repeated daily, sometimes as often as five times in the twenty-four hours, till the little Schultz could remain submerged for twenty-five minutes at a time, and no doubt as growth increases he will perfect himself in amphibiousity.

A New Destroyer of the Hair.

Under the above title Dr. BŒTTGER, in the *Memorabilien*, says that we possess a new material for destruction of hair, of a most suitable description, in a mixture of one part of crystallized sulphydrate of sodium with three parts of fine carbonate of lime mixed and reduced to a very fine powder. This mixture may be kept any length of time without alteration in well closed bottles. When moistened with a drop of water and laid by means of the back of a knife on the part of the skin covered with hair, we see in a few minutes and find the thickest hair turn into a soft mass, easily removed by means of water. If it remain on the part long it will cause a slight irritation of the skin.

Chloral Hydrate in Nocturnal Incontinence of Urine.

Dr. G. LEONARDI mentions several cases of nocturnal incontinence of urine cured by means of chloral hydrate. In one case, in a boy æt. 8, of good health and strong constitution, the patient had suffered from the complaint from early childhood. He was cured of the disease, by doses of eighty centigrammes in water, in the course of five days. In a girl, æt. 15, who had also suffered from the complaint since the age of childhood, doses of one gramme effected a rapid cure. A boy, æt. 13, had suffered from the disease since the age of 5, after typhoid fever. He was speedily cured by the same medication. His brother, æt. 8, also suffered since childhood from the same affection, but was cured in a week with doses of eighty centigrammes at night. The fifth case was of a girl, æt. 8, who suffered after having had worms. She was speedily cured by chloral hydrate. Dr. LEONARDI hence holds that chloral is the best remedy against bed-wetting, when this depends on spasm of the detrusor vesicæ, against which the sphincters can offer no sufficient obstacle. The patients should use as little water as necessary with the remedy, and take as little drink as they can, especially towards evening. The patient is much benefited in health by the cure of the disease.

Oxide of Zinc.

Dr. BRACKENRIDGE says, in the London *Medical Times and Gazette*, on zinc in infantile diarrhœa:—"The disease depends chiefly on a weak and too impressionable state of the nerve-centres presiding over alimentary secretion; that it is correlated to convulsions and other spasmodic diseases, and that it is accompanied by hyperæmia of the secreting surfaces of the alimentary canal." To meet these indications we need a remedy which is tonic, anti-spasmodic and astringent. Oxide of zinc was chosen upon this theory, and twelve cases are recorded in which this remedy was successfully employed.

Remarks on Methylene.

Dr. RICHARDSON says that this anæsthetic is rapid in its effect, that "from one to two drachms will induce, in the space of a minute and a half to two minutes, sufficient insensibility for a short operation, while from two to six drachms are sufficient for the production of prolonged anæsthetic sleep." The sleep induced is very gentle, and rarely attended with convulsive movement; vomiting is less frequent than from chloroform, ether, or bichloride of methylene.

CORRESPONDENCE.

Ergot in Abortion.

EDS. MED. AND SURG. REPORTER:—

While agreeing in every respect with Drs. BRUBAKER and CORSON, as to the action of opium and its salts in labor and abortion, I differ with them as to the action and use of Ergot. Dr. Corson asks (MED. AND SURG. REPORTER, May 31st), "would we dare ply a woman with ergot when pregnant and threatened with abortion? Certainly not." Now I claim and can establish by the testimony of at least fifty cases, that when threat-

ened abortion is evidenced by pain and hemorrhage, ergot in *full doses* is the safest and most certain remedy known to the profession. Not for the purpose of checking hemorrhage and expelling the contents of the uterus, but to check hemorrhage and retain the fetus *in situ* with safety to both mother and child.

My first experience with ergot as a remedy for threatened abortion, was during the fall of 1859, upon Bayou Grosse Tete, where I was called to see a negro woman. I found her in the fifth month; the bed deluged with blood; pulse almost imperceptible; sighing respiration; her body bathed in a cold clammy perspiration; the hands and feet cold as death; the os patulous and dilated to the size of a dollar. I plugged the vagina, and gave at once ʒss. vini ergotæ in ʒjss. of whiskey, and repeated in half an hour, and with what result? According to the views of Drs. Carson, Byrd and others, abortion completed should have been the consequence. But much to my surprise, the pains ceased, and upon the removal of the plug I found the os contracted and absolutely no hemorrhage. I continued the ergot in ʒj. doses with whiskey every six hours, for seventy-two hours, still expecting her to miscarry. But she went to full time and gave birth to a stout, hearty, healthy child. This was contrary to all that I had learned in school or hospital (I am a graduate from the Charity Hospital, New Orleans), and I had been taught that the loss of ʒj blood followed by ergot made abortion inevitable. But here was a loss of nearly all the blood in the body, followed by heroic doses of ergot, with no abortion.

The second case was April 2d, 1860; primapara; third month; hemorrhage profuse; os patulous; bound to miscarry. To stop the hemorrhage and expel the fetus I gave ʒj aromat tinct. ergot every twenty minutes, till hemorrhage ceased and the pains ceased with it. She went to her full time and gave birth to a healthy, hearty child.

These are but typical cases out of many. I have been a practitioner of medicine ever since, except the three years of the war, and although I have treated many cases of threatened abortion, I have not had a single case to abort when I could get my patient under the influence of ergot before the fetus had already partially escaped from the os. I have had three cases during the last five months (regular pains and hemorrhage), to all of whom I gave ergot, and *none* aborted. For the last two years, when pains have been severe, my first dose has been from ½ to 1 gr. morphia in 2 teaspoonsful fld. ext. ergot, and repeat the ergot in ʒss. doses every half hour, till hemorrhage ceases. The morphia I often do not give; but the ergot I never fail to give in full doses.

Dr. Carson asks again, "would we give ergot to a pregnant woman at any period of gestation, for the relief of suffering, however acute and wholly unconnected with her pregnancy? Certainly not." My experience with two cases says we may. That if it does no good, it does no harm. In 1863 I had a patient who had miscarried eleven times, and always at the completion of the third month, in spite of rest, opium, and all I could do to prevent. I knew nothing of the tonic influence of viburnum prunifolium, and looking upon ergot as a simple uterine tonic, and nothing else, at least during the early stages of pregnancy, I put her upon ʒj. doses vini ergotæ, night and morning, for two weeks, till the evil time had passed, and she has had no abortion since, but has become the happy mother of three fine children.

Case second, in 1872. Aged twenty-two years; never been pregnant; catamenia irregular for years; sometimes goes from three to five months with no show. I did not suspect pregnancy, nor did she. Tremendous hemorrhage from bowels. In addition to other treatment, I gave ʒj. fl. ext. ergot every hour, till hemorrhage ceased. Six months and two days afterward she was delivered by me of a fine full grown child.

I believe the prolific cause of abortion is a relaxed atonic condition of the muscular walls of the uterus, and that ergot, by its special tonic action upon that organ, restores tone, brings back to a normal condition, and thereby stops hemorrhage and prevents abortion. Such is my experience for the last fourteen years, and now I expect ergot to stop hemorrhage and relieve pain with as much certainty as I expect quinine to break up an ordinary intermittent. I know that I will be looked upon as a heretic by the mass of the profession. But such has been my experience, and for a country doctor, it has been no small one.

J. W. SAUNDERS, M. D.,
Clinton, La., June 13, 1873.

Age vs. Labor.

EDS. MED. AND SURG. REPORTER:—

In your editorial of July 12, commenting on my researches into the relation of age to work, you say that the value of my statistics is impaired if not destroyed by the fact that I did not take into account the tables of mortality, and did not consider the well understood fact that the majority of persons living in this world are under forty years of age.

Now if there is any question connected with these researches to which I have given more attention than to any other, it is to this very question, *the average age of those who have done the original work of the world.*

In all cases where I study a life of a person not living I take the age at death. So far as I have gone in my investigations the average age of the great men of history, taking the names as they come, and including, of course, those who, like Byron, Raphael, Mozart, etc., die young, is *over sixty.*

I have published my researches on the longevity of brain-workers so frequently

that it seems hardly necessary to repeat them. They can be found in the old numbers of the *Hours at Home* and of the *College Courant*, of New Haven. I may say further that in connection with this treatise on age and work, and side by side with it, and indeed as a part of it, I have for years been preparing a work on Longevity, and that the researches for the two works are carried on together, and aid and supplement each other.

Still further I may say that the conclusions which I announced in my very first articles on longevity, that brain-workers, for various reasons, live longer than muscle-workers, that clergymen live longer than any other great actively working-class in modern society, which statements were ridiculed and disputed then just as these conclusions in regard to age and work are ridiculed and disputed now, have since been confirmed by a number of observers, and have been accepted by the Clergymen's Life Insurance Company of New York.

I speak of these facts to show that so far from neglecting I have given special attention to the longevity of the original workers of the world, and that my conclusions, though utterly opposed to the once popular notions, have been in a measure accepted.

That the most important original work of the world has been done by a few hundred, or at least a few thousand men, no one who has given much thought to the subject will deny; and if the average age of these at death is over sixty—not far from sixty-five, as I have proved—and if the original work of *these men* was done *early*, and not late in life, then the demonstration of the law of the relation of age to work is complete. With the rest of the human race we have simply nothing to do. Their expectation of life, their average longevity, may be subjects of interest, but in this investigation we need to know only *the tables of mortality of the original workers whom we study.*

The statistics of Dr. Jarvis, a gentleman, by the way, to whom I have been much indebted during all my investigations on the subject of longevity, have no possible bearing on the question under discussion. I may state here that a very common mistake of those who criticise new facts and generalizations, is to *assume* that their originators generalized, without taking into account all sides of the question, and all the qualifying considerations. The subject of age and work I have endeavored to approach from every point of the compass. To one exception to the law that my opponents usually adduce, I can bring up five or ten. The general objection to which you refer, that the aged have less stimulus to originate work than the young, I have considered in elaborate detail, and in its various bearings. It is, I think, the most important objection that has been brought against my theory.

To the materialistic and sentimental objections that you array at the close of your article, there is, perhaps, no occasion for me to reply. The same objections have been brought, under various forms, against every radical advance in thought, from the birth of science until now, and they will continue to be brought, under similar or different forms, so long as man shall attempt to think and science shall continue to advance among men. Arguments against scientific facts or theories, drawn from their real or apparent tendencies, seem to be more appropriate for a political or a religious than for a scientific journal, to be more worthy of the 14th century than the 19th, and to be more suited to the latitude of Spain than of America.

Scientific discoveries are simply the thoughts of the Creator revealed through his creature, and if their tendencies are evil, the Creator and not the discoverer is responsible.

At the present time a number of thoughtful observers are investigating this subject, both in its scientific and practical relations. To these I may offer three suggestions:—

1. That they rigidly observe the distinction between *original* and *routine* work. It is the original, creative, pioneering work that tests brain-power.

2. That they first collect their facts and theorize afterwards.

3. That in all their biographical and historical reading this subject be kept constantly in view.

In closing this communication I wish to express my appreciation of the courtesy and candor with which you have conducted the discussion.

GEO. M. BEARD, M. D.

New York, 122 Madison av., July 15, 1873.

[In the above letter Dr. BEARD substantially acknowledges the justice of our criticism. He has assumed a special and peculiar longevity for men of genius, and considers them exempt from the ordinary laws of mortality of the human family, and even of their own nations. We repeat and maintain that they are of like mortal stuff with the rest of us, and that their work must be measured by the average mortality of their time and nationality, not by that of the longest lived class in the community. We would also remind Dr. BEARD that a theory is not necessarily great and true because it is opposed and criticised, for foolish ones meet this fate also; and that the "sentimental objections" we mentioned were offered not as arguments against his theory, but as the reasons why we took the pains to disprove it. At best, his argument is deducing a positive proposition from a negative—many men of sixty do no original work, therefore, they as a class, cannot—not a rigidly scientific deduction.—EDS. REPORTER.]

A Monstrosity.

EDS. MED. AND SURG. REPORTER:—

In the afternoon of May 12th, 1872, Mrs. B. gave birth to a rather remarkable monstrosity, of which I send you a short description.

This being her seventh parturition, and

having a roomy pelvis, delivery was accomplished quickly and without difficulty. The body of the child, a female, was of ordinary size and well developed in all its parts; attached to it by a small pedicle was the body of a second child, the lower part of which was reasonably well developed; buttocks large, the articulations of the lower limbs well formed, feet and toes complete, yet inverted, the upper portion of the body very much smaller, terminating with the rounding of the shoulders and acephalous, the arms rudimentary and terminating in one finger.

The pedicle connecting the two was short, and about an inch in diameter, located in the upper epigastric region, the bodies facing each other.

The external genital organ, that of a female also, was well developed, and the urine was regularly voided. The anus was imperforate.

At the earnest solicitation of the parents, and after several careful consultations, it was decided to try the operation of separation, the child being two weeks old.

Present during the operation were Drs. S. M. Swann, W. B. Lowman, F. Schill, and J. C. Wilson. Dr. Swann applied a strong ligature around the pedicle, which evidently produced extreme pain, as the child cried vigorously. Small quantities of ether were administered at intervals, sufficient to control the pain, but not enough to produce complete etherization. Gradually the temperature of the isolated body decreased, indicating that the circulation had been intercepted.

After waiting awhile it was decided to remove the isolated mass, which was done by a circular incision around the upper part of the pedicle, leaving a sufficient button to prevent the slipping of the ligature. As the incision was extended a rudimentary spinal column was discovered extending through the pedicle, also some of the small intestines were found to be common.

Upon examining the mass after separation it was found that the kidneys and a small bladder were the only independent organs. The kidneys were abnormally large. The mass after separation weighed between three and four pounds.

The child died in about four hours after the operation, and unfortunately the opportunity for a thorough post-mortem examination was not granted.

Respectfully,
J. R. CALDWELL, M. D.

Johnstown, Pa., July 7, 1873.

[Dr. CALDWELL transmits a photograph of this singular monstrosity, exhibiting the connection he describes very distinctly.—EDS. REPORTER.]

—F. Clarence, oldest son of Dr. John Thornley, surgeon in the United States Navy, residing in Charlottesville, Va., accidentally shot himself, July 21st, and died immediately.

NEWS AND MISCELLANY.

Death of Romberg.

The German medical journals announce the death, on the 16th of June, at the age of seventy-seven, of Moritz Heinrich Romberg, the eminent writer on the pathology of the nervous system. Dr. Romberg was born in Meiningen, and graduated at the University of Berlin in 1817, after which he studied in Vienna under John Peter Frank. In 1820, he was appointed a medical officer of the poor in Berlin; a situation which he held for twenty-five years. In 1830, on the outbreak of cholera in Berlin, he was appointed director of the cholera hospital; and he held a similar post when the epidemic again appeared six years later. In 1838 he became an extraordinary professor, and in 1845 ordinary professor, in the University of Berlin. His principal work, a treatise on the *Nervous Diseases of Man*, was first published in three parts, in 1840, 1843, and 1846, and was, in 1853, translated into English, by Dr. Sieveking, for the late Sydenham Society. He also edited, in German, Sir Charles Bell's *Physiological and Pathological Researches on the Nervous System*, and was the author of treatises on cholera and on respiratory paralysis, and of various contributions to the periodicals. For some years before his death he had symptoms of heart disease.

The Michigan State University.

To answer numerous inquiries the following preamble and resolutions were passed by the Board of Regents of this institution

WHEREAS, The Legislature of the State of Michigan at its last session re-enacted the law of 1855, requiring the appointment of Homœopathic Professors in the Medical Department of the University; and, whereas, it has always been claimed by the Board of Regents that the law was an infringement upon the rights and prerogatives of the Board; and, whereas, the Supreme Court of the State has refused to grant a mandamus requiring the Regents to comply with the law, thereby substantially confirming their action therefore,

Resolved, That we maintain the position heretofore taken, and decline to make the appointments required by law.

Resolved further, That we do this in no spirit of factious opposition to the apparent will of the Legislature, but because we believe the true and best interests of the University demand it.

Resolved, That we re-affirm the former action of the Board expressing a willingness to take official charge of an independent school of Homœopathy, and connect it with the University, whenever the means shall be provided for the payment of its professors.

The Cholera.

The present epidemic seems to be approaching both by the Mediterranean and north Europe route. It has spread through Turkey and the Levant since November of last year (1871), and has spread over Northern Russia to St. Petersburg, where it has existed since July 13; it was reported in October in Dantzig and Dresden, and is now stated to be at Hamburg, from which port it has been twice introduced into England. Although the Baltic ports are or soon will be closed, yet the other routes are open, and the increase of commerce with the Mediterranean involves an increase of liability, so that England cannot expect to ward off the disease for a longer period than formerly, and it is not improbable that its spread to Ireland and this country may even be more rapid than formerly.

Faithful Inspection Necessary.

The New York *Daily Times* says:—The work of the sanitary squad and the Board of Health is said to be well done in this City. So far as the vulgar eye of ordinary humanity can penetrate, that is so. But there is, according to the statements of the Fourth Ward medical practitioners, at least, a terrible hidden nest of pestilence in its tenement-houses; worse, even, than ever before. The Board of Health and the police have their officers and detectives patroling the streets, lanes, and alleys, to arrest violators of the Sanitary laws, and, so far as the open infraction of them are concerned, the officers succeed. The streets look clean, gutters are free from garbage and refuse, there are no barrels or dust-pans on the sidewalks, because the boys who swarm in the neighborhood would steal them. Outside all looks well, but inside the close, confined, badly-ventilated rooms are worse than ever. The doctors say that the pails of filth and refuse, which the denizens of the garrets, basements, and hall rooms used to empty into the street, are now kept in-doors for fear of the police, and as in many of these terrible rookeries there is no provision made for the removal of deposits of dirt, except that furnished by the streets and gutters, the pails remain unemptied in holes and corners all day, festering and breeding pestilential vapors, until night comes and allows the wretched inmates to steal out and get rid of the nuisance.

New Hampshire Medical Association.

On July 16th the White Mountain New Hampshire Medical Association met at the Lancaster House. A number of the fraternity were in from Coos and Grafton, and some visiting brethren from Essex and Caledonia counties, Vermont. There were about twenty-five present. Dr. John McNab, of Woodsville, New Hampshire, who is nearly ninety years old, and is President of the Association, was present.

The True Surgeon—An Anecdote of Nelaton.

Speaking of a visit to one of the Paris hospitals, a writer says: "As we passed into the hall we heard groans, evidently of a child in great pain. The door leading to the sick ward was ajar, and as we approached we heard the voice of a man talking earnestly with a little sufferer. There was something very affecting in the imploring tones of the child's voice and the tender and sympathizing replies of the physician, and it seemed to us no breach of etiquette to witness unseen through the crack of the half open door the scene that was passing within. On a narrow pallet near the window lay a fine boy, nine or ten years old, dying of cancer developing itself between the eyes and behind the nose. It had not shown itself externally, but had destroyed the sight, and was attended by excruciating suffering. By his side sat a stately white haired man holding with one hand the two of the little patient, while with the other he caressingly smoothed his hair. The child told the story of his pain. *'Ah je souffre tant!* to which the old man listened patiently, promising to devise some relief. Then he rose to go, but first bent over the boy, and with tears dropping from his eyes kissed his forehead as lovingly as a mother. The white haired man was the world renowned Nélaton; Nélaton lately summoned to attend the fallen Emperor."

The Quincy, Illinois, Medical College.

Some time past a project had been set on foot by a number of leading medical gentlemen for the establishment of a Medical College in Quincy, Illinois. The necessary documents have been received from the Secretary of State authorizing a committee appointed for the purpose to act as commissioners to open books to the capital stock of the Quincy Medical College, the capital stock being fixed at $50,000. The commissioners were also authorized to draft the necessary rules, etc., and when ready to report; a meeting of the stockholders will be held, when trustees will be elected and the faculty appointed. It is intended to have the institution in operation this fall.

The "Black Doctor."

Our readers will remember that some years ago a miserable character, by the name of Vries, calling himself the "Black Doctor," was reported as performing most miraculous cures in Paris, where he created a great sensation. He has just died in great destitution, without leaving money enough to pay his funeral expenses.

Dr. Charles T. Jackson,

The eminent chemist of Boston, has been taken to the Insane Asylum at Somerville, Mass. Dr. Jackson was one of the most important experts in the celebrated trial of Professor Webster for killing Dr. Parkman. It was he who suggested to Morton the use of sulphuric ether as an anæsthetic.

Reports, Catalogues, Lists.

We are under obligations to several attentive friends who have sent us, for use in the final revision of our lists, for the MEDICAL REGISTER AND DIRECTORY OF THE UNITED STATES, leaves from city directories containing lists of physicians, and in some instances for *copying* off all the names of physicians in large cities. Secretaries of Medical Societies and those connected with hospitals, medical colleges, and other public medical institutions, are reminded that it is for the *interest of their members and institutions* to give us complete information in regard to them. Many physicians, not appreciating the importance of the work, it being something new in this country, neglect replying to the circulars sent them, and they will have an equivocal standing in the Directory, unless by our researches we succeed in placing them "right on the record."

At this time we have the following Directories:—Washington, D. C., San Francisco, Chicago, New Orleans, Cincinnati, Jersey City, New York City, Buffalo and Rochester, N. Y., Cleveland, Ohio, St. Joseph and Kansas City, Mo., the New York and Chicago Medical Registers, and a list of the homœopathic physicians of Illinois.

QUERIES AND REPLIES.

Natural History.

Dr. A. D. B., of Pa.—Works on Natural History are so numerous that it is impossible to recommend any one which covers the entire field. You had better buy separate works on the several branches.

Honorary Degrees.

We reply once more, and we hope finally, to inquiries how to obtain "honorary degrees," that no respectable regular school grants them on application without actual attendance. They are not on sale, so far as we know. And if they were, and we knew it, we don't intend to deal in them.

Porous Splints.

Dr. F. R. B., of Pa.—We think very highly of the Porous Splints, but we have no agency for them. Write to the inventor, Dr. DAVID AHL, *Newville, Pa.*

Ship Surgeon.

Dr. D. W. A., of Miss.—There are generally opportunities to go as surgeon on emigrant ships between New York and Europe, but such positions can only be obtained through personal application, as no examination is required, and it is merely an appointment by the ship owner or consigner. The pay is small. Perhaps by visiting our leading seaports and using your references you can obtain such a position. We have ourselves no direct opportunities to assist you, or we would willingly do so.

OBITUARY.

DR. SAMUEL B. MOSES.

Dr. MOSES was born in Exeter, N. H., October 17th, 1826. He was prepared in the celebrated Philip's Academy, of his native town, for admittance into the William's College, Mass., where he graduated. In 1850 he came to Tennessee, resided for a year or two in Knoxville, then moved to Sumner county, where he taught school with marked success for about eight years. In 1862 he returned to Knoxville with his health somewhat impaired. In the fall of that year he entered the medical department of the University of Virginia, and at the close of a single course of lectures received the degree of M. D.

Immediately after his graduation the strong recommendation of the Faculty of the University secured for him the appointment of Assistant Surgeon in the hospital in the vicinity, where he remained until the close of the war. Soon afterwards he went to New York, where the position of Resident Physician of the Woman's Hospital of that city was tendered him. He accepted the place and held it for twelve months; the confinement and labor being too severe for his health he resigned it and went into a general practice. In 1869 his friends solicited him to return to Knoxville, where he has since resided, arduously engaged in the duties of his profession.

Dr. MOSES was twice married; first to Miss Sarah J. Arnold, of North Adams, Mass., who died in Sumner county, Tenn., in 1861, and whose remains were, in accordance with an ardent desire she expressed in her last sickness, brought to our own cemetery for burial. His second wife, formerly Miss Bettie Overton Brown, of Charlottesville, Va., and one child, now survive him.

MARRIAGES.

GRAHAM—RITCHIE.—July 11th, by the Rev. William Greenough, John Graham, M. D., and Emily Harris Ritchie, both of Philadelphia.

JACOBI—PUTNAM.—On July 22d, at the City Hall, New York, by Mayor Havemeyer, Dr. Abraham Jacobi and Dr. Mary C., daughter of the late George P. Putnam.

WALLACE—MACLAY.—June 10th, by the Rev. J. A. Crawford, Thomas H. Wallace and Emma C. Maclay, youngest daughter of Dr. C. T. Maclay, of Green Village, Franklin county, Pa.

DEATHS.

ATLEE.—At Wilmington, Del., after a short illness, Lauren, youngest son of Dr. W. L., Jr., and Annie Atlee, of this city, aged 7 months and 5 days.

FAUGHT.—In this city, July 21st, Dr. S. B. H. Faught, eldest son of L. R. and M. J. Faught, in the 21st year of his age.

LINDERMAN.—At her residence, in South Bethlehem, Penn., July 22d, Lucy P., wife of G. D. Linderman, M. D., and daughter of Hon. Asa Packer.

LUDLOW.—At the family residence, Cincinnati, July 15th, of consumption, Maria Van Matre Ludlow, wife of Dr. John Ludlow, in the 38th year of her age.

PETERS.—In Brooklyn, July 19th, 1873, Emily Louisa, daughter of Surgeon Dewitt C. Peters, United States Army, aged 8 months and 13 days.

ZABRISKIE.—In Flatbush, N. Y., July 19th, Ida Garvin, infant daughter of Dr. John L. and Eliza B. Zabriskie.